

Attn.: Examiner Jesse Moll
Art Unit: 2181
Fax: 571-272-8300

Docket No.: NHL-HAN-01
Serial No.: 09/273,468
Customer No.: 52671

Claim Amendments

1-10. (canceled)

11. (currently amended) A rotary, one-piece, multi-tooth milling cutter having a central cutter axis, said milling cutter comprising:

a plurality of teeth, each of said plurality of teeth comprising a lateral cutting edge being configured and disposed to be rotated about said central cutter axis and being configured to cut generally parallel thereto;

 said lateral cutting edge being configured and disposed to cut in a cutting direction along a circular cutting path centered at said central cutting axis;

 said lateral cutting edge being configured and disposed to define a non-zero relief angle disposed opposite said cutting direction between said cutting tool and said cutting path;

 each of said plurality of teeth comprising a first tooth face and a second tooth face;

 said first tooth face comprising a surface, said first tooth face surface being disposed to face away from the cutting direction;

 said second tooth face comprising a surface, said second tooth

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face surface being disposed to face toward the cutting direction; and
said second tooth face surface being disposed between said
lateral cutting edge and said central cutter axis; and
said second tooth face surface comprising:
at least a first section and a second section being
disposed between said lateral cutting edge and said central
cutter axis;
said first section being disposed to extend from said
lateral cutting edge and to said second section;
said first section having a continuously outwardly curved,
convex shape;
~~said first section being configured and disposed to bulge~~
outwardly away from said first tooth face surface; and
said second section having a continuously inwardly curved,
concave shape; and
~~said second section being configured and disposed to~~
extend inwardly toward said first tooth face surface.

12. (previously presented) The milling cutter as claimed in
Claim 11, wherein the length of the first section on the tooth face is

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20% or less than the length of the tooth face between the cutting edge and central cutter axis.

13. (previously presented) The milling cutter as claimed in Claim 11, wherein the first section blends tangentially into the second section.

14. (previously presented) The milling cutter as claimed in Claim 11, further including a concave chip-breaking section located between the first and second sections of the tooth face.

15. (previously presented) The milling cutter as claimed in Claim 11, wherein the first section is smaller in length than the second section.

16. (currently amended) A rotary, one-piece, multi-tooth milling cutter having a central cutter axis, said milling cutter comprising:
at least one tooth comprising a lateral cutting edge being configured and disposed to be rotated about said central cutter axis and being configured to cut generally parallel thereto;

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said lateral cutting edge being configured and disposed to cut in a cutting direction along a circular cutting path centered at said central cutting axis;

said lateral cutting edge being configured and disposed to define a non-zero relief angle disposed opposite said cutting direction between said cutting tool and said cutting path;

said at least one tooth comprising a first tooth face and a second tooth face;

said first tooth face comprising a surface, said first tooth face surface being disposed to face away from the cutting direction;

said second tooth face comprising a surface, said second tooth face surface being disposed to face toward the cutting direction; and

said second tooth face surface being disposed between said lateral cutting edge and said central cutter axis; and

said second tooth face surface comprising:

at least a first section and a second section being disposed between said lateral cutting edge and said central cutter axis;

said first section being disposed to extend from said lateral cutting edge and to said second section;

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said first section having a continuously outwardly curved,
convex shape;

~~said first section being configured and disposed to bulge~~
outwardly away from said first tooth face surface.

17. (previously presented) The milling cutter as claimed in
Claim 16, wherein the length of the first section on the tooth face is
20% or less than the length of the tooth face between the cutting
edge and central cutter axis.

18. (previously presented) The milling cutter as claimed in
Claim 16, wherein the first section blends tangentially into the
second section.

19. (previously presented) The milling cutter as claimed in
Claim 16, further including a concave chip-breaking section located
between the first and second sections of the tooth face.

20. (previously presented) The milling cutter as claimed in
Claim 16, wherein the first section is smaller in length than the

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second section.

21. (previously presented) The milling cutter as claimed in
Claim 11, wherein said second section is concave.

22. (previously presented) The milling cutter as claimed in
Claim 16, wherein said second section is concave.

23-24. (canceled)